Benjamin Bengfort

Resume

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Experience

Faculty Director, Georgetown University, Washington, DC.   2014–present
Adjunct Faculty, Data Analytics Certificate Program (CCPE). Teaching *Foundations of Data Science*, *Software Engineering for Data*, *Data Sources, Data Analysis II: Machine Learning*, and *Applied Data Analytics*.

Data Scientist, Cortex Building Intelligence, Washington, DC.   2017–2018
Time-series analysis and modeling of building management sensor data for real-time recommendations to improve building energy efficiency.

Partner, District Data Labs, Washington, DC.   2014–2017
Architect and develop innovative open source projects, facilitating local developer contributions and research, including Yellowbrick, visual steering for machine learning, and Baleen, a large scale corpus ingestion engine.

Chief Data Scientist, Cobrain Company, Bethesda, MD.   2013–2014
Developed a Global Recommendation Engine, using Collaborative Filtering algorithms as well as Active Learning and adaptive systems from a machine-learning standpoint. Graph traversal and clustering across massive data stores required distributed Graph databases: Titan, as well as strong computation in Hadoop and Python with Pandas and NumPy.

Chief Technology Officer, Unbound Concepts, Baltimore, MD.   2011–2013
Natural Language Processing across a large dataset of children's literature using Machine Learning and predictive analysis with clustering and multivariate non-linear regression
Big data analysis applied to the NLP and ML using Hadoop and MapReduce techniques.

Lead Programmer, Tactical Network Solutions, Columbia, MD.   2010–2012
Python software development for embedded, mobile and server applications
Large-scale and real-time data analysis of Petabytes of wireless packet collects.
Real time asset tracking software development with geolocation and KML toolkits

CMS Analyst, Oxford University Press, Oxford, United Kingdom.   2007–2009
Management of custom content management solutions for electronic publishing division

Junior Network Engineer, CenGen, Inc., Columbia, MD.   2003–2004
Network support for DARPA's Grand Challenge & USMC Condor

Education

PhD Computer Science, University of Maryland, College Park.   2014-2019
Dissertation: Planetary Scale Data Storage (defended November 2018)

M.S. Computer Science, North Dakota State University.   2008-2010
Phi Kappa Phi, Upsilon Pi Epsilon

B.A. Economics, University of Maryland, College Park.   2004-2006
Primanum Honor Society

English Major, United States Naval Academy.   2002-2003

Skills

Software Development: Python 3.6+, GoLang 1.9+, JavaScript, Java, C/C++, Git & GitHub, Agile

Big Data: Spark, Hadoop, MapReduce, HDFS, Distributed Systems, Celery

Machine Learning: Scikit-Learn, Yellowbrick, TensorFlow, SparkML, GraphX

NLP: NLTK, spaCy, Gensim, TextBlob, Pattern

Application Development: Django, Nginx, AJAX, jQuery, Bootstrap, Flask, REST microservices

Databases: PostgreSQL, MongoDB, BoltDB, Redis, Hive, Titan, Neo4j, MySQL, SQLite

Publications

Benjamin Bengfort, Rebecca Bilbro, and Tony Ojeda. *Applied Text Analysis with Python: Enabling Language Aware Data Products with Machine Learning.* O'Reilly Media, Inc.

Benjamin Bengfort and Xiaojiang Du. Efficient resource allocation in Hybrid Wireless Networks. In *Wireless Communications and Networking Conference (WCNC), 2011 IEEE*, pages 820–825. IEEE.

Benjamin Bengfort and Pete Keleher. Brief Announcement: Hierarchical Consensus. In *Proceedings of the 2017 ACM Symposium on Principles of Distributed Computing*, pages 355–357. ACM.

Benjamin Bengfort and Pete Keleher. Federating Consistency for Partition-Prone Networks. In *Proceedings of the 2017 IEEE 37th International Conference on Distributed Computing Systems (ICDCS).* IEEE.

Benjamin Bengfort and Jenny Kim. *Data Analytics with Hadoop: An Introduction for Data Scientists.* O'Reilly Media, Inc.

Benjamin Bengfort, Philip Y. Kim, Kevin Harrison, and James A. Reggia. Evolutionary design of self-organizing particle systems for collective problem solving. In *Swarm Intelligence (SIS), 2014 IEEE Symposium On*, pages 1–8. IEEE.

Benjamin Bengfort, Konstantinos Xirogiannopoulos, and Pete Keleher. Anti-Entropy Bandits for Geo-Replicated Consistency. In *Proceedings of the 38th International Conference on Distributed Computing Systems (ICDCS).* IEEE Computer Society Press.

Tony Ojeda, Sean Patrick Murphy, Benjamin Bengfort, and Abhijit Dasgupta. *Practical Data Science Cookbook.* Packt Publishing Ltd.

Volunteer Experience

- UMD Department of Computer Science: Education Committee
- Advances in Cognitive Systems 2015: Referee and Reviewer
- UMD Senate: Nominations Committee, Committee on Committees, Student Affairs Committee, Special Working Group on Senate Communications.
- Data Community DC: Treasurer, Board Member, and Organizer for DIDC.
- Vino Scholastico: Board member for HCC tuition fundraising event.